Gastric and duodenal inflammation and ulceration and cholecystitis are other complications of hepatic artery infusion of floxuridine. These complications appear to be related to the incidental perfusion of the involved organs by floxuridine. The frequency of the gastric and duodenal complications can be minimized at the time of pump implantation by ligating the gastroduodenal artery and collaterals that arise distal to the point of cannulation of the hepatic artery. Most investigators recommend routine cholecystectomy at the time of placement of the infusion pump to prevent the development of drug-induced cholecystitis.

No prospectively randomized studies comparing the efficacy and toxicity of intravenous with intraarterial administration of 5-FU or floxuridine have yet been completed. Appropriately designed, prospectively stratified, randomized trials comparing intravenous administration with hepatic artery infusion of chemotherapy for colorectal carcinoma metastatic to the liver only are in progress in the Northern California Oncology Group (headquarters in Palo Alto) and at the Memorial Sloan-Kettering Cancer Center (New York). Definitive conclusions regarding the precise role of hepatic arterial infusion chemotherapy must await the completion of these studies.

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The Routine Preoperative Chest X-ray Study

ACCORDING TO THE REPORT of a World Health Organization (WHO) Scientific Group, "There are some excellent studies on the futility of preoperative chest radiography," a conclusion that was reached after a comprehensive study of the relevant international medical literature. This opinion is endorsed by the Food and Drug Administration, the US Bureau of Radiological Health and most of the American specialist colleges and societies. If the results of a clinical examination are normal, no preoperative chest x-ray film is needed at any age for any surgical procedure. Moreover, even when there are clinical chest symptoms, there is little advantage to be gained in most cases because clinical judgment will decide the choice of anesthesia with as much accuracy as a chest x-ray study. Nor will postoperative management be affected by information gained from a preoperative chest film, which is not only not cost-effective but increases the radiation given both to an individual patient and to the population. Indeed, it is time that the routine chest film cease to be part of a routine physical examination, preoperatively or otherwise; the only exception may be in populations wherein chest disease is known to be prevalent.

The WHO Scientific Group on the Indications for and Limitations of Major X-Ray Diagnostic Investigations concluded that

> provided a careful clinical examination is made and there is no clinical evidence of chest disease, there is no indication for preoperative chest radiology. If the clinical examination discloses an abnormality, this in itself is not necessarily an indication for radiography. Such cases must be judged on their merits.

The available references are numerous; only a selection can be provided here.

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Fine-Needle Aspiration Biopsy of Thyroid

THYROID NODULES are common and about 4% or 40,000 per million persons in the United States have nodular goiters. Thyroid cancer, however, is rare: about 40 cases per million persons. Thus, great selectivity is necessary in deciding which nodules are likely to be malignant and to require aggressive surgical management.

Fine-needle aspiration biopsy of the thyroid has largely solved this dilemma. Introduced by Soderstrom in 1952, it has been used widely in Sweden, Europe and Japan. Only in the past ten years, however, with the development of a cadre of trained cytologists, has fine-needle aspiration biopsy been widely used in the United States.

Fine-needle aspiration biopsy of the thyroid is a simple office procedure, nontraumatic, acceptable to patients and easily repeated if necessary. If the aspirate is diluted with blood, or not enough thyroid tissue is obtained, it must be repeated. Other than an occasional tiny hematoma at the site of aspiration, there have been no complications. There has been no spread of cancer with this technique.

A physician will usually receive one of three reports from the cytologist: (1) clearly malignant, (2) clearly benign or (3) follicular neoplasm or suspicious for neoplasm.

Papillary, medullary, anaplastic and metastatic neoplasms are easily diagnosed and, if present, require surgical confirmation and appropriate therapy. Clearly benign lesions include involutionary nodules, benign thyroid nodules, chronic lymphocytic thyroiditis (Hashimoto's thyroiditis), subacute thyroiditis and multinodular goiter. Patients with these lesions are usually treated with levothyroxine to suppress thyroid-stimulating hormone and growth. Follicular neoplasms are usually benign (about 85%) but occasionally malignant (15%). If the lesion is large (more than 2 cm), firm or has shown recent growth, it should be surgically removed. If it is small and soft, the patient can be given a trial of thyroxine therapy for three to six months. If the lesion fails to regress or grows, then it should be removed. Cysts of the thyroid can